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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,478	04/15/2005	Yukie Mori	123497	6501
7590 Oliff & Berridge PO Box 19928 Alexandria, VA 22320			EXAMINER THOMAS, JAISON P	
			ART UNIT	PAPER NUMBER
			1751	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/09/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

6

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/531,478	MORI, YUKIE	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jaison P. Thomas	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 December 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This action is responsive to amendments filed on 12/15/2006.
2. Claim 1 is amended.
3. The rejections of Claims 1-6 under 35 USC 102(b) as being anticipated by Smith et al. (US Patent 6375867) are withdrawn in view of applicant's amendments.
4. The rejections of Claims 1-6 under 35 USC 102(b) as being anticipated by Yasuko et al. (JP 06-089802) are withdrawn in view of applicant's amendments.
5. The rejections of Claims 1-6 under 35 USC 102(b) as being anticipated by Hiroshi et al. (JP 05-198404) are withdrawn in view of applicant's amendments.
6. The rejections of Claims 1-6 under 35 USC 102(b) as being anticipated by Yasuko et al. (JP 05-198403) are withdrawn in view of applicant's amendments.
7. Claims 1-6 stand rejected under 35 USC 102(b) as being anticipated by Shea et al. (US Patent 6459358).
8. Claims 1-6 stand rejected under 35 USC 102(b) as being anticipated by Cole et al. (US Patent 6362722).
9. Claims 1-6 stand rejected under 35 USC 102(b) as being anticipated by Handa (US Patent 6452476).
10. Claims 1-6 stand rejected under 35 USC 102(b) as being anticipated by Baigrie (US Patent 5250228).
11. Claims 1,2 and 4 stand rejected provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 11 of copending Application No. 11/092643.

***Response to Arguments***

12. Applicant's arguments filed 12/15/2006 have been fully considered but they are not persuasive.

A. Shea et al. (US Patent 6459358)

Applicant argues that Shea does not teach a thermistor body that contains a rubber modified epoxy resins wherein the rubber is polybutylene, butadiene/acrylonitrile with terminal functional groups, or polybutadiene with terminal functional groups.

Examiner notes that instant Claim 1 does not merely require epoxy resins from the group discussed immediately above, but from the Markush group including several additional epoxy resins as disclosed in Claim 1. Shea teaches a PTC composition that includes a mixture of two epoxy resins where there is a majority of a "short chain aliphatic diepoxide" and minor amount of bisphenol A epoxy resin (Column 5, lines 21-25). The aliphatic diepoxide can be a diglycidyl ether of ethylene, propylene or butylenes glycol which examiner construes as equivalent to an "epoxidized polyolefin" or a "polyol-based epoxy resin" as required by the instant Claim 1.

B. Cole et al. (US Patent 6362722)

Applicant argues that Smith does not teach a thermistor body having a epoxy resin with the linear structures of divalent organic groups presented by formulas (iii) and (v) combined with a two glycidyl ether groups as required by instant Claim 1.

Art Unit: 1751

Examiner notes that instant Claim 1 does not merely require epoxy resins from the group discussed immediately above, but from the Markush group including several additional epoxy resins as disclosed in Claim 1. Cole teaches a current limiting device wherein both a high Tg and low Tg epoxy are blended together wherein the low Tg epoxy resin is comprised of low viscosity polyglycol epoxy resins (Column 5, lines 50-54). The Examiner construes this resin as equivalent to the "polyol-based epoxy resin" as required by the instant Claim 1.

C. Handa (US Patent 6452476)

Applicant argues that Handa does not teach a thermistor body which contains a urethane-modified epoxy resin obtained when a urethane preoplymer obtained by a reaction between polyether polyol and polyisocyanate is reacted with an epoxy resin having a hydroxyl group within the molecule.

Examiner notes that instant Claim 1 does not merely require epoxy resins from the group discussed immediately above, but from the Markush group including several additional epoxy resins as disclosed in Claim 1. Handa teaches the use of an epoxy resin of an "unsaturated polyester" which is made from reaction between an anhydride compound and a polyhydric alcohol. The Examiner construes this polyester (with the polyhydric alcohol component present) as being equivalent to the "polyol-based epoxy resin" as required by the instant Claim 1.

D. Baigrie (US Patent 5250228)

Art Unit: 1751

Applicant argues that Baigrie does not teach a thermistor body having a epoxy resin with the linear structures of divalent organic groups presented by formulas (iii) and (v) combined with a two glycidyl ether groups as required by instant Claim 1.

Examiner notes that instant Claim 1 does not merely require epoxy resins from the group discussed immediately above, but from the Markush group including several additional epoxy resins as disclosed in Claim 1. Baigrie teaches epoxies including a polyglycidyl ether of a polyhydric alcohol (trade name Epon 812) and polyglycol diepoxides (trade names DER 732 and 736) (Column 3, lines 63-66 and Column 4, lines 4-6) which examiner construes as being equivalent to the "polyol-based epoxy resin" as required by the instant Claim 1.

### ***Conclusion***

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 1751


14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaison P. Thomas whose telephone number is (571) 272-8917. The examiner can normally be reached on Mon-Fri 8:30 am to 5:00 pm.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jaison Thomas  
Examiner  
3/1/2007

JT

  
**LORNA M. DOUYON**  
**PRIMARY EXAMINER**